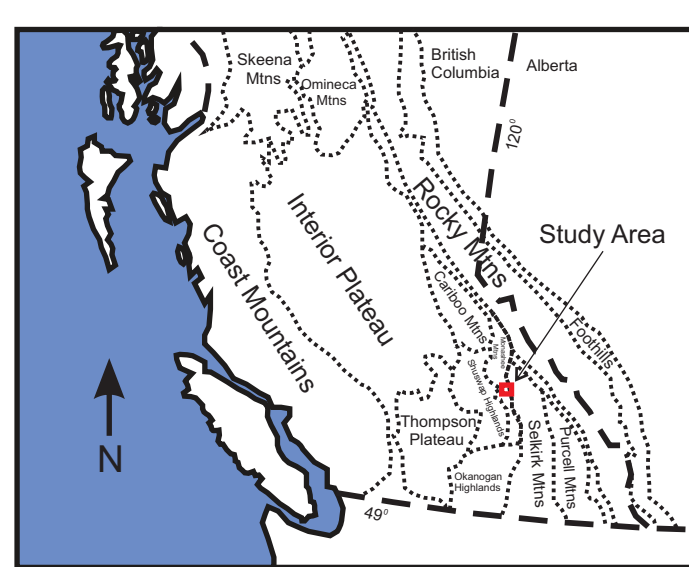


A Geological Map of the Thor-Odin Culmination, Monashee Mountains, BC.

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1:35000
kilometers



LEGEND

Intrusive rocks

- Ca** (Eocene) Three Valley Gap Lamprophyre dykes: Calc-alkaline kersantites.
- Ed** (Eocene? Proterozoic?) Frigg dykes: Calc-alkaline gabbro.
- PLB₁** (Early Paleocene) Lady Bird leucogranite: Leucoquartz monzonite with plutonic or pegmatitic equivalents.
- JG₁** (Jurassic) Galena Bay stock: Muscovite granite ??
- PT₁** (Permian - Triassic) Pyroxenite and/or equivalent ultramafic rocks.
- D₁** (Devonian) Joss Mountain orthogneiss: Granite to granodiorite.

Monashee complex

Cover assemblage (Proterozoic to)

- P₁** Undifferentiated paragneiss comprising any or all of the units listed below.
- P_{1a}** Amphibolite including garnet amphibolite and biotite amphibolite.
- P_{1b}** Pelitic and semi-pelitic schists and gneisses: Generally rich in aluminosilicate minerals and garnet. May contain lenses of quartzite, calc-silicate and amphibolite.
- P_{1c}** Calc-silicate gneiss: may contain lenses of pelitic schist, amphibolite and marble (below); generally coloured green and purple.
- P_{1d}** Quartzitic calc-silicate gneiss: May contain lenses of calc-silicate gneiss with some schist and marble.
- P_{1e}** Marble: Buff or brown colored marble.
- P_{1f}** Psammite, semi-pelitic, pelitic schist: Generally containing aluminosilicate minerals and garnet; may contain lenses of calc-silicate, marble (below), amphibolite or quartzite (below).
- P_{1g}** Quartzite: Composed mostly of quartz with varying amounts of feldspar; may contain lenses of pelitic schist; includes the Simpson Lake, Mt. Thor, and Joss Mountain quartzites.
- P_{1h}** Marble: May contain lenses of calc-silicate and pelitic or semi-pelitic schist, commonly buff, brown or white coloured; includes the Empress marble.
- P_{1i}** Calc-silicate gneiss: May contain lenses and layers of pelitic schist, quartzite, amphibolite and marble.
- P_{1j}** Basal quartzite: Variable amount of feldspar, grading into faserkiesel gneiss (below); commonly with well developed banding, generally defined by biotite and/or muscovite rich layers; may contain lenses of schist and/or paragneiss and amphibolite.
- P_{1k}** Faserkiesel gneiss: Large proportion of feldspar with quartz; contains abundant on scale quartz/sillimanite pods (faserkiesel).

Basement assemblage (Paleoproterozoic)

- IP₁** Undifferentiated para- and orthogneiss: predominantly migmatitic paragneiss with lesser amounts of orthoamphibole-cordierite (OAC) mafic schist. May contain abundant aluminosilicate minerals. Olivine and spinel with OAC, aluminosilicate and/or garnet with OAC; may be associated with amphibolite including garnet amphibolite and biotite amphibolite.
- IP₂** Biotite-quartz-feldspar paragneiss: Characterized by large, abundant garnetiferous amphibolite boudins and granitic pegmatite; includes Fawn Lake assemblage and parts of the Three Valley.
- IP₃** Biotite-feldspar-quartz paragneiss: Commonly psammitic; may contain lenses of pelitic schist, garnet-feldspar-quartz gneiss and amphibolite, commonly with granitic pegmatite; may be in part equivalent to biotite-quartz feldspar paragneiss above.
- IP₄** Leucoquartz monzonite and gneissic quartz monzonite; unit C1a of Reesor and Moore, 1971.
- IP₅** Hornblende-biotite granodiorite orthogneiss: Includes augen orthogneiss, biotite orthogneiss, as well as biotite granite orthogneiss (below) and 'fuzzy' hornblende leucogranite.
- IP₆** Granitic biotite orthogneiss: May contain hornblende and range in composition from granite to granodiorite.
- IP₇** Biotite granodiorite orthogneiss: Contains about 50% biotite; unit C2b of Reesor and Moore, 1971.
- IP₈** Granodiorite orthogneiss: Contains about 10-15% biotite; unit C3c of Reesor and Moore, 1971.
- IP₉** Calc-silicate (diopside) gneiss: Characterized by extensive outcrop of diopside boudins with marble, paragneiss and quartzite (below) layers.
- IP₁₀** Quartzite
- IP₁₁** Biotite-Quartz-feldspar gneiss: Characterized by a well differentiated layering that is commonly
- IP₁₂** Biotite-Quartz-feldspar gneiss: Characterized by a continuous, well differentiated layering without a large proportion of granitic orthogneiss.

Joss Mountain complex

- P_{JM}** Undifferentiated paragneiss: Predominantly calc-silicate gneiss and marble; granitic to dioritic orthogneiss common.
- P_{JM1}** Amphibolitic gneiss.
- P_{JM2}** Calc-silicate gneiss.
- P_{JM3}** Marble: Brown weathering marble with calc-silicate gneiss interlayers.
- P_{JM4}** Pelitic schist: Locally amphibolite rich.
- P_{JM5}** Quartzite: White weathering; massive.
- P_{JM6}** Heterogeneous paragneiss: May include calc-silicate gneiss, semi-pelitic or psammite gneiss.
- P_{JM7}** Semi-pelitic schist and gneiss: May include psammite schist and gneiss.

Structure	Generation				
	1	2	3	4	5
Foliation	✓	✓	✓	✓	✓
Lineation	✓	✓	✓	✓	✓
Fold axes	✓	✓	✓	✓	✓
Z-fold	✓	✓	✓	✓	✓
S-fold	✓	✓	✓	✓	✓
Axial plane	✓	✓	✓	✓	✓
Boudin neck	✓	✓	✓	✓	✓

Contacts	Defined	Approximate	Interpreted

Faults	Defined	Approximate/Interpreted

Fold Axial Planes	F2	F3	F4

- The approximate location of maps used in the Thor-Odin compilation. The contributors are referenced in the legend below.
- Jonsson, 1977; Spink, 2001
 - Williams, Kruse and McNeil (unpublished)
 - Read, 1979
 - Read and Klepac, 1981
 - Hill, 1973
 - Craig, 1966
 - Mullis, 1979
 - Reesor and Moore, 1971
 - Coleman, 1990
 - Duncan, 1982
 - Car, 1990
 - Hoy, 1977

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